AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-60. (Canceled)

61.   (Previously Presented) A data processing method for transmitting data through a communication channel in a mobile communications system, comprising:

setting a coding rate of an encoder to an initial value;

adjusting the coding rate at the encoder by varying the coding rate from the initial value to an adjusted value according to a ratio of a channel interleaver size and a number of bits input into the encoder;

encoding data input into the encoder at a coding rate having the adjusted value; and

rate matching an output of the encoder to the channel interleaver size.

62.   (Previously Presented) The method of claim 61, wherein the encoder is a turbo encoder.

63.   (Previously Presented) The method of claim 61, wherein said adjusting the coding rate of the encoder comprises puncturing data encoded at a first coding rate of the encoder to effectuate a second coding rate in a puncturing block of the encoder.

64.   (Previously Presented) The method of claim 61, wherein:

the first coding rate is 1/5; and

the second coding rate is one of 1/2, 1/3, and 1/4.

65.   (Previously Presented) The method of claim 61, wherein data input into the encoder comprises at least one of an information bit, a cyclic redundancy check bit, a tail bit, and a reserve bit.

66.   (Canceled)

67.   (Currently Amended) The method of claim [[66]]61, wherein:

the coding rate is varied to 1/3 if the ratio is greater than 2 and less than or equal to 3;

the coding rate is varied to 1/4 if the ratio is greater than 3 and less than 4; and

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the coding rate is varied to 1/5 if the ratio is greater than or equal to 4 and less than 5.

68.   (Canceled)

69.   (Canceled)

70.   (Previously Presented) The method of claim 61, wherein:

said rate matching comprises applying a puncturing algorithm to the output of the encoder for each symbol group;

each symbol group is data output from the encoder for data that is input into the encoder over a predetermined period of time;

the data output from the encoder is divided into even symbol groups and odd symbol groups; and

different puncturing patterns are applied to even symbol groups than to odd symbol groups.

71.   (Currently Amended) The method of claim 61, wherein said rate matching comprises puncturing the output of the encoder according to a puncturing algorithm.

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72.   (Previously Presented) The method of claim 71, wherein the puncturing is applied to symbol groups of the output of the encoder having indices 2j and 2j+1 for (j ·K) mod J < K where j=0 to J-1, J= $\lfloor \frac{I}{2} \rfloor$ and K= $\lfloor \frac{L-N}{2} \rfloor$, I is a number of data bits per frame, L is a number of the encoded data bits wherein the data bits include tail bits, N is the block interleaver size, and the encoder is a turbo encoder.

73.   (Previously Presented) The method of claim 72, wherein the symbol groups of output of the encoder for the data bits except the tail bits having indices 2j and 2j+1 are applied to each different puncturing patterns.

74.   (Previously Presented) The method of claim 72, wherein the symbol groups of output of the encoder for the tail bits having indices 2j and 2j+1 are applied to each same puncturing patterns.

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75.   (Previously Presented) The method of claim 71, wherein the puncturing algorithm

is according to:

Pattern range	$2I<N<=3I$ $n=3$		$3I<N<4I$ $n=4$		$4I<=N<5I$ $n=5$	
	P_0	P_1	P_0	P_1	P_0	P_1
Puncturing pattern	110	101	1101	1101	11101	11011
Tail puncturing pattern	101	101	1011	1011	11011	11011

76.   (Previously Presented) The method of claim 71, wherein the puncturing algorithm

is according to:

Pattern range	$2I<N<=3I$ $n=3, p=2, u=2$		$3I<N<4I$ $n=4, p=4, u=3$			$4I<=N<5I$ $n=5, p=2, u=2$	
	P0	P1	P0	P1	P2	P0	P1
Puncturing pattern	110	101	1101	1101	1010	11101	11011
Tail puncturing pattern	101	101	1011	1011	1010	11011	11011

77.   (Previously Presented) The method of claim 71, wherein the puncturing algorithm

is according to:

Pattern range	$2I<N<=3I$ $n=3, p=2, u=2$		$3I<N<4I$ $n=4, p=4, u=3$			$4I<=N<5I$ $n=5, p=2, u=2$	
	P0	P1	P0	P1	P2	P0	P1
Puncturing pattern	110	101	1101	1111	1010	11101	11011
Tail puncturing pattern	101	101	1011	1111	1010	11011	11011

78. (Previously Presented) The method of claim 71, wherein the puncturing algorithm is according to:

Pattern range	$2I<N<=3I$ n=3		$3I<N<4I$ n=4			$4I<=N<5I$ n=5	
	P0	P1	P0	P1	P2	P0	P1
Data puncturing pattern	110	101	1101	1110	1011	11101	11011
Tail puncturing pattern	101	101	1011	1011	1010	11011	11011

79. (Currently Amended) The method of claim [[69]]61, wherein:

the output of the encoder comprises at least one encoded data bit and at least one encoded tail bit;

said rate matching comprises applying a first puncturing pattern and a second puncturing pattern to said at least one encoded data bit according to the coding rate; and

said rate matching comprises applying a third puncturing pattern and a fourth puncturing pattern to said at least one encoded tail bit according to the coding rate.

80. (Previously Presented) The method of claim 79, wherein:

the first puncturing pattern is applied to even groups of said at least one encoded data bit;

the second puncturing pattern is applied to odd groups of said at least one encoded data bit;

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the third puncturing pattern is applied to even groups of said at least one encoded

tail bit; and

the fourth puncturing pattern is applied to odd groups of said at least one encoded

tail bit.

81. (Previously Presented) The method of claim 80, wherein if the coding rate is 1/3:

the first puncturing pattern is "110";

the second puncturing pattern is "101";

the third puncturing pattern is "101"; and

the fourth puncturing pattern is "101".

82. (Previously Presented) The method of claim 80, wherein if the coding rate is 1/4:

the third puncturing pattern is "1011"; and

the fourth puncturing pattern is "1011".

83. (Previously Presented) The method of claim 80, wherein if the coding rate is 1/5:

the first puncturing pattern is "11101";

the second puncturing pattern is "11011";

the third puncturing pattern is "11011"; and

the fourth puncturing pattern is "11011".

Claims 84-192   (Canceled)